



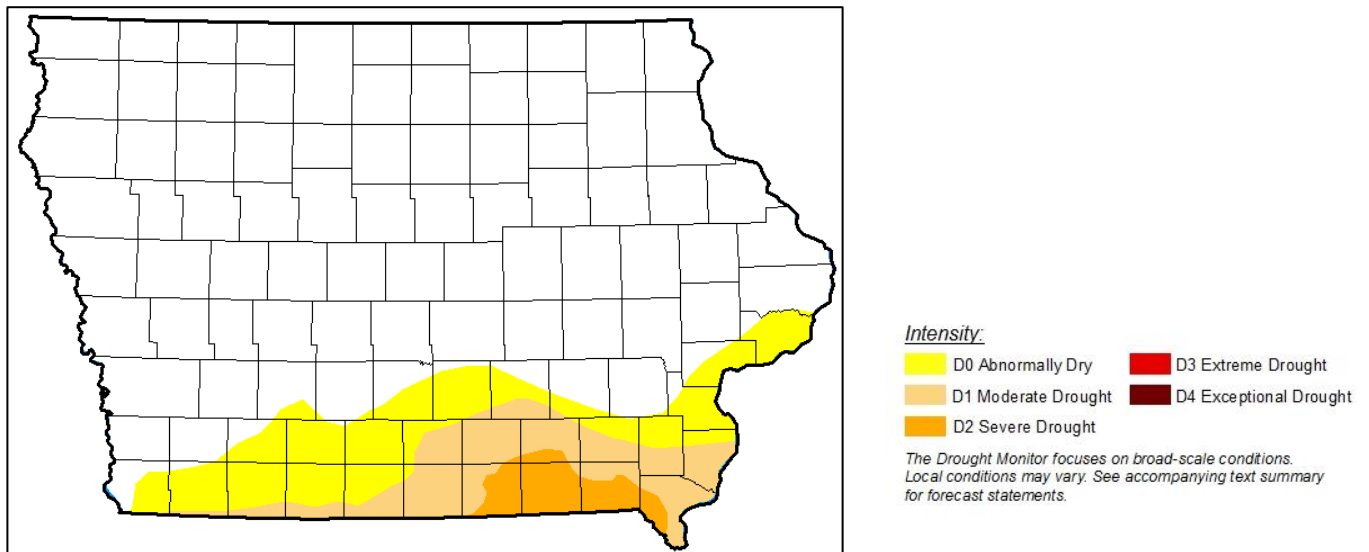
WATER SUMMARY UPDATE

Published Date July 12, 2018 | Issue 87

A snapshot of water resource trends for June 2018

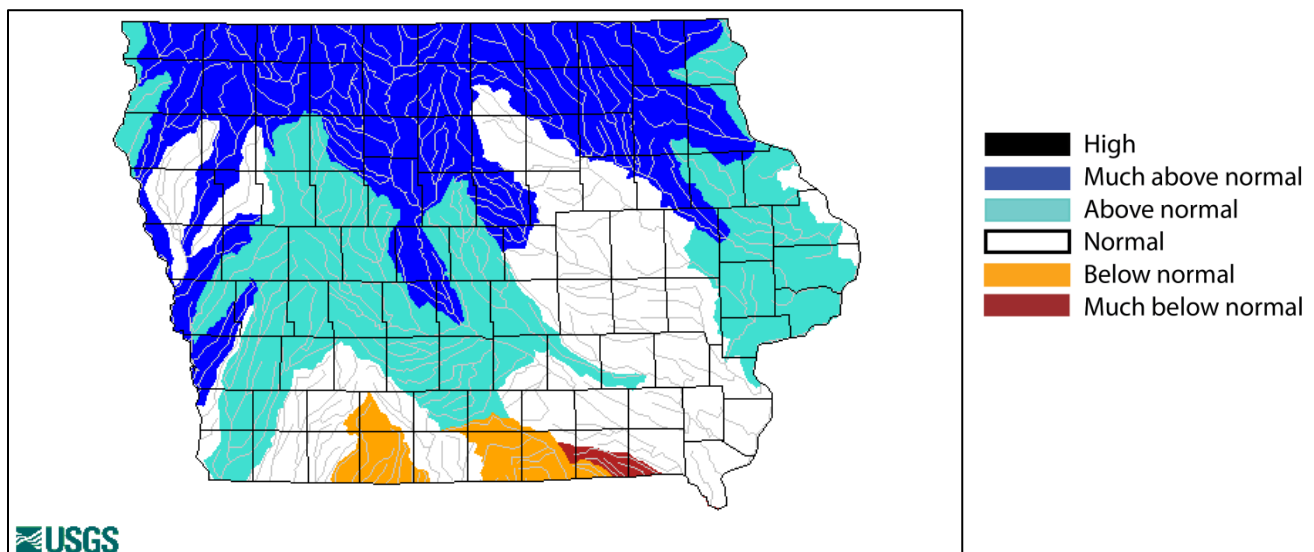
Drought Monitor - Conditions as of July 12, 2018.

National Drought Mitigation Center and partners



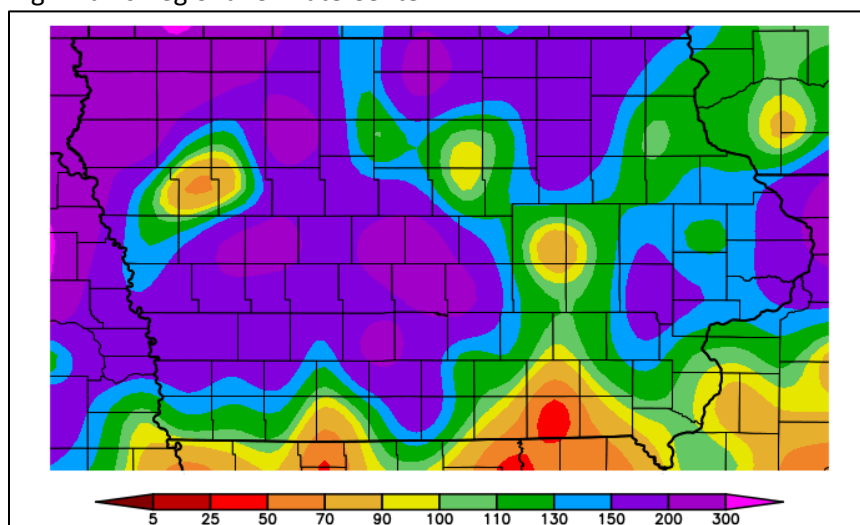
Stream Flow - Seven-day average stream flow for June 2018.

US Geological Survey



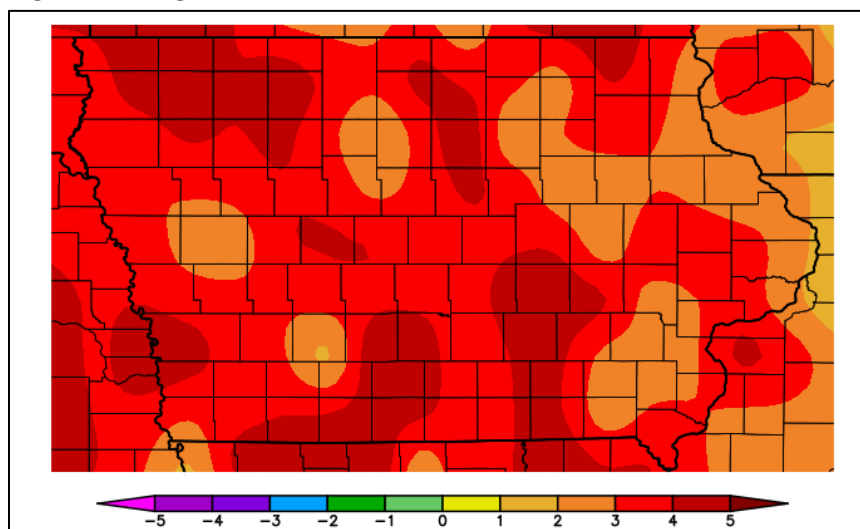
Precipitation - Percent of normal precipitation for June 2018.

High Plains Regional Climate Center



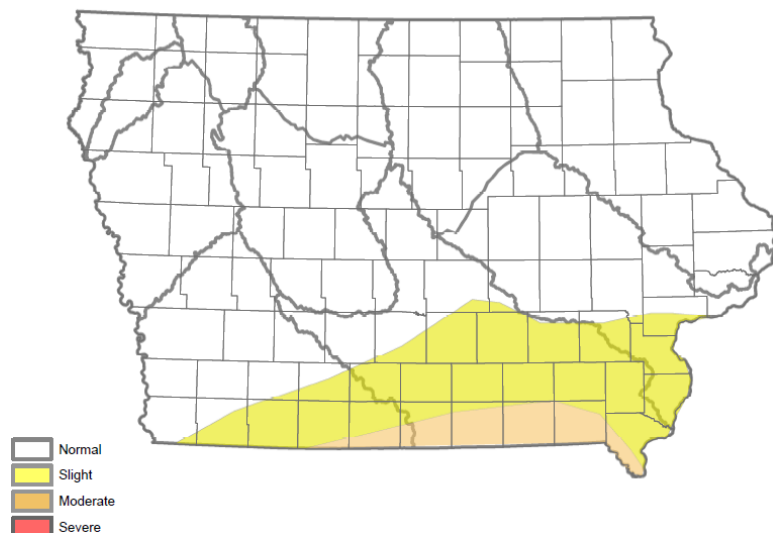
Temperature – Departure from normal temperature (°F) for June 2018.

High Plains Regional Climate Center



Shallow Groundwater - Conditions for June 2018.

Iowa DNR and IIHR-Hydroscience and Engineering



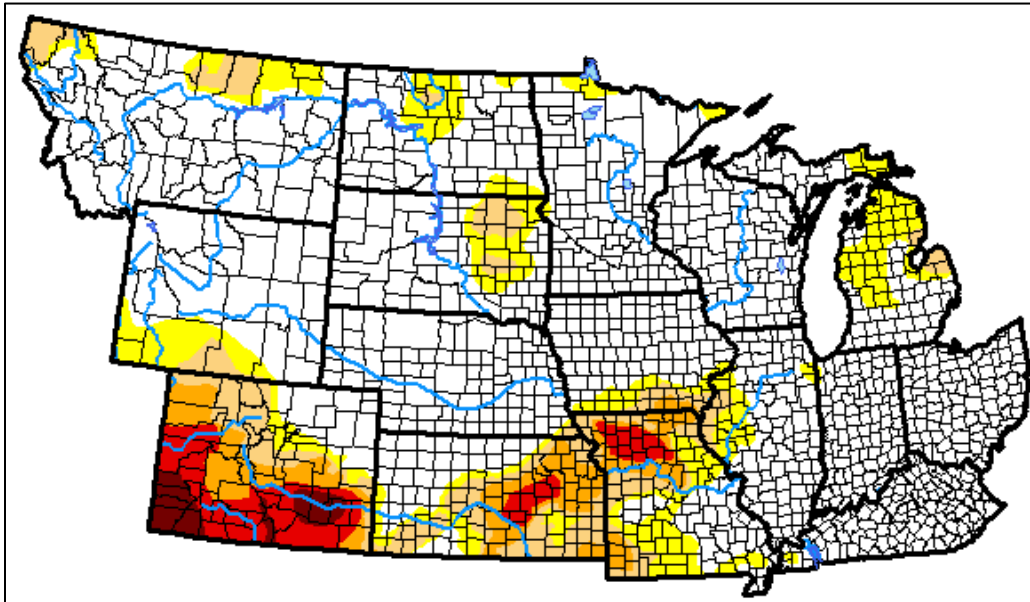
Recent Developments and Changes

SUMMARY

As Iowa heads into the second half of 2018, conditions continue to follow the pattern of wetter than normal conditions in the north and drier than normal conditions in the south. Southeast Iowa has areas of severe drought, while northern Iowa stream flows are much above normal in many watersheds. June was generally wet and warm for the state, and there remains a concern for shallow groundwater levels in southeast Iowa. The July 9 USDA Crop Report indicates that some fields remain ponded in the northern two-thirds of the Iowa, while in south central and southeast Iowa topsoil moisture short to very short in many locations. This is another indication of the pattern that has persisted in Iowa for the past two years.

DROUGHT MONITOR

Above normal temperatures across Iowa have continued through the month of June, however much of the state did receive above average precipitation. The southern third of the state remains in D0 (Abnormally Dry) to D1 (Moderate Drought) along the Missouri-Iowa border. An area of D2 (Severe Drought) was added in parts of six counties (2.41% of the state), with Davis and Van Buren Counties almost fully covered. Across the broader region, northern Missouri saw a large expansion of D2 – Severe Drought from the Missouri-Iowa border south to the Missouri River. Kansas and the pan-handle of Oklahoma and Texas saw a significant reduction of the D3-Extreme Drought and D4-Exceptional Drought from May. The northern two-thirds of Minnesota experienced a 28% decrease in Abnormally Dry (D0) conditions. Severe Drought across North Dakota has continued to subside, with D1 conditions almost entirely removed.



CURRENT STREAM FLOW

Streamflow conditions in much of the state moved from normal conditions to above and much above conditions. The northern third of the state moved into much above normal, and the middle third of the state moved into above normal after large rainfall events in June. Provisional peak of record streamflows and water-surface elevations were observed on the Floyd River, Fourmile Creek, and Walnut Creek. Many USGS crews were deployed to these and other locations to ensure accuracy of reported real-time values. Meanwhile, streamflow conditions in the Chariton and Fox Rivers are much below and below normal.

MAY PRECIPITATION AND TEMPERATURE

This was the 10th wettest June on record, with Iowa receiving an average of 7.53 inches of rainfall, 2.53 inches above the 30-year climatological expectation. Much of northern and western Iowa received rain accumulations 150 – 200% of normal rainfall, or about 3.5 inches above expected amounts. The border region between Iowa and Missouri received near normal precipitation amounts, while some locations in the southeast reported rainfall between 50 – 75% of normal. Eastern Iowa generally saw near normal rainfall of around five inches; northeast Iowa observed up to 2.46 inches above normal.

Temperatures across the state generally ranged from two to four degrees above normal. The statewide average temperature was 3.3 degrees above normal, at 73.3 degrees. This ranks June 2018 as the tenth warmest on record, following the third warmest May. June also broke the 124 year observational record for average low temperatures, with the statewide value coming in five degrees above the normal 63.1 degrees.

SHALLOW GROUNDWATER

Shallow groundwater conditions continue to be below normal through June for parts of south central and south east Iowa, and the southern tier of counties has been downgraded to moderate drought. Shallow groundwater conditions in the rest of Iowa are normal or above normal for June. Flooding continues to be a problem in northwest Iowa and parts of central Iowa.

ADDITIONAL INFORMATION

For additional information on the information in this Water Summary Update please contact any of the following:

General Information and Drought Monitor: Tim Hall, Iowa DNR Tim.Hall@dnr.iowa.gov 515-725-8298
Precipitation: Justin Glisan, State Climatologist justin.glisan@iowaagriculture.gov 515-281-8981
Stream Flow: Dan Christiansen, US Geological Survey dechrist@usgs.gov 319-358-3639
Shallow Groundwater: Mike Gannon, Iowa Geological Survey mike-gannon@uiowa.edu 319-335-1581